

**Amendments to the Claims:**

This listing of claims replaces all prior versions, and listings, of claims in the captioned application.

**Listing of Claims:**

Claims 1-26 (canceled)

Claim 27 (currently amended) A method for analysis of a solid material, comprising:

- (a) coring the solid material with a coring tool such that a plug is formed;
- (b) extruding the plug of solid material;
- (c) exposing the plug of solid material to radiation; ~~and~~
- (d) detecting scattered radiation; and
- (e) analyzing the scattered radiation to obtain information about the crystalline

structure of said solid material using powder X-ray diffraction or Raman spectroscopy.

Claim 28 (previously presented) The method for analysis of a solid material of claim 27, further comprising compressing said solid material after said plug is formed.

Claim 29 (previously presented) The method for analysis of a solid material of claim 27, further comprising loading said coring tool onto a rack after said solid material is extruded.

Claim 30 (previously presented) The method for analysis of a solid material of claim 29, wherein said rack comprises a top plate with one or more holes.

Claim 31 (previously presented) The method for analysis of a solid material of claim 30, wherein said top plate is composed of a material that absorbs x-ray radiation.

Claim 32 (previously presented) The method for analysis of a solid material of claim 27, wherein a pin is used to extrude said plug of solid material.

Claim 33 (previously presented) The method for analysis of a solid material of claim 32, wherein a micrometer is used to adjust the position of said pin.

Claim 34 (previously presented) The method for analysis of a solid material of claim 29, wherein said rack further comprises a lifting plate.

Claim 35 (previously presented) The method for analysis of a solid material of claim 27, wherein said radiation is x-ray radiation.

Claim 36 (previously presented) The method for analysis of a solid material of claim 27, wherein said radiation is infrared radiation.

Claim 37 (previously presented) The method for analysis of a solid material of claim 35, wherein said x-ray radiation is emitted with an angle of incidence less than or equal to 2.50 degrees.

Claim 38 (currently amended) A method for the analysis of a plurality of solid samples, comprising:

- (a) coring each solid sample with a coring tool such that each solid sample forms a plug;
- (b) extruding each plug of solid material;
- (c) exposing each plug of solid material to radiation; ~~and~~
- (d) detecting scattered radiation; and
- (e) analyzing the scattered radiation to obtain information about the crystalline structure of each plug of solid material using powder X-ray diffraction or Raman spectroscopy.

Claim 39 (withdrawn) A system for analyzing a solid material, comprising:

- (a) a coring tool comprising a means for extruding a plug of solid material;
- (b) a means for exposing the plug of solid material to radiation; and
- (c) a means for detecting scattered radiation.

Claim 40 (withdrawn) The system for analyzing a solid material of claim 39, further comprising a means for compressing said solid material.

Claim 41(withdrawn) The system for analyzing a solid material of claim 39, further comprising a rack, wherein said rack comprises a top plate with one or more holes.

Claim 42 (withdrawn) The system for analyzing a solid material of claim 41, wherein said top plate is composed of a material that absorbs x-ray radiation.

Claim 43(withdrawn) The system for analyzing a solid material of claim 39, wherein a plurality of solid materials is analyzed.